

NASA OZONE SCARE ENTERS TWILIGHT ZONE

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NASA played the role of the Grinch that stole Christmas when it proclaimed that it had absolute proof that manmade chemicals were destroying the ozone layer.

The proof turned out to be the "discovery" that one of its satellites had detected hydrogen fluoride (HF) over the south pole. NASA's startling claim was made in a press conference on December 19, 1994, just in time to dampen America's Christmas cheer.

NASA scientists asserted that HF can be produced only from manmade sources. Therefore, they claimed, chlorofluorocarbon (CFC) is the trigger that causes thinning of the ozone layer. This happens when sunlight breaks down the CFCs, freeing HF and chlorine. The chlorine then reacts with the ozone.

It is incredible that NASA would release such blatantly incorrect information. To say in absolute and unequivocal terms that HF can only come from manmade sources is an assertion refuted by scientific literature.

Not only is HF produced naturally, but most natural HF is produced in the Antarctic. It is surprising that NASA was surprised at this "discovery!"

An article in the November 1990 *Geophysical Research Letters* reports the results of extensive measurements of volcanic gases taken in 1983 from Mt. Erebus in Antarctica. These results showed that hydrogen chloride (HCl) and HF emissions were 1,230 and 480 tons per day respectively.

The above article goes on to explain that Mt. Erebus's HCL and HF emissions "are extremely high and comparable to the lower limits of total global volcanic emissions."

Thus, Mt. Erebus spews out over 150,000 tons of HF in the Antarctica stratosphere. Only 2,480 tons per year of fluorine are theoretically released by the alleged breakup of CFCs. Even more curious is that most CFCs are produced in the northern hemisphere, yet little to no corresponding ozone thinning has occur-

red at the north pole!

Another article in the 8/4/88 edition of *Nature* affirmed "Naturally degassing volcanoes also emit significant quantities of HF, some of which is directly injected into the stratosphere. Thus, volcanoes should be regarded as a significant source of tropospheric and stratospheric HF."

Flagrantly incorrect assertions like the one made by NASA are extremely serious.

The proposed ban on CFCs is already having a shocking effect. Americans are discovering that a \$15 Freon recharge of their air conditioner in 1992 now costs \$70 to \$150. Imagine people's reaction when they have to replace their entire air conditioner or refrigerator after the ban goes into effect!

The bad news doesn't stop there. It seems the chemicals substituting for CFCs are also stratospheric ozone eaters. Speculation is that this replacement equipment will be banned by the year 2000.

Prudence would dictate that at a minimum, a risk analysis should be conducted before placing such a huge burden on Americans. Yet, anyone who suggests it is attacked as a heretic.

The reason a risk analysis is scorned is obvious. Americans might not be so eager to take the cool hundred billion dollars or so out of their pockets that the ban would cost. Especially if they knew it was being thrown down another environmental black hole for a potentially low risk problem.

For instance, most people are unaware that the ozone thickness at both poles nearly doubles in the winter months and is thinnest in the late summer and fall. Nor do they know that stratospheric ozone thinning occurs almost exclusively at the south pole. And it only thins during late winter and early spring — just when the ozone layer has past its peak thickness.

Even if thinning were to occur in the far northern hemisphere, it would be in February and March when there is little risk to sunbathers and agricultural crops! So why the fuss?

Another little known fact is that the

ozone layer is as much as 130 percent thicker at the poles as at the equator when polar thinning occurs. A simple computation reveals that a 10 percent thinning at the north pole (an improbable worst case scenario) would be benign. Santa and his reindeer would still have double the ozone thickness protecting them from the weak Arctic sun than is found *naturally* at the equator under the intense equatorial sun.

Closer to home, citizens of Spokane, WA *naturally* have over 11 percent less ozone protecting them than those in Salt Lake City! And a Spokane family taking a late winter vacation in the Tucson sun would have 25 percent less ozone protection than they did when they left their frigid home.

This information is well known to NASA and others. Yet, there are no apocalyptic warnings for southerners to move north where the ozone layer would be thicker — even after CFCs "might" thin it!

Strong evidence suggests that there is low risk in waiting to learn if we really need to ban CFCs. Diverting massive sums of money to fix low risk problems could be costing our economy over a trillion dollars annually according to a July 1992 Heritage Foundation study. By squandering our resources on environmental black holes having low risk, we may find we no longer have the wealth to protect the environment at all.

NASA has done this nation a serious disservice by making such false statements. It is a classic example of why Americans have become disillusioned about self-serving bureaucracies that hurt the citizens they are supposed to serve.

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